Description of the Proposed Action for the

Granite Meadows Project

McCall and New Meadows Ranger Districts
Payette National Forest

Adams, Valley, and Idaho County

October 2018



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Introduction

The Granite Meadows Project is located in Adams, Valley, and Idaho Counties, north of New Meadows, Idaho and North and West of McCall, Idaho in: T18N, R2E; T19 N, R2 E; T19N, R3E; T20N, R1E; T20N, R1W; T20N, R2E; T20N, R3E; T21N, R1E; T21N, R1W; T21N, R2E, Boise Meridian (Figure 1).

The Granite Meadows project area is located within Management Areas (MA) 6 (Goose Creek/Hazard Creek), MA 5 (Middle Little Salmon River), MA 7 (Payette Lakes), MA 4 (Rapid River) and MA 9 (Lake Creek/French Creek) (USDA Forest Service, 2003). The project area includes parts of the Patrick Butte, French Creek and Rapid River Inventoried Roadless Areas (IRAs) as well as the Bruin Mountain Research Natural Area (RNA). Proposed treatments include timber harvest, thinning, prescribed fire, road treatments, watershed treatments, and recreation improvements. All proposed treatments within IRAs and the RNA would be consistent with the Idaho Roadless Rule.

There are approximately 70,000 acres of National Forest System (NFS) lands within the project area. The project area also includes State of Idaho and private land (approximately 7,000 and 6,000 acres, respectively). The Wyden Amendment (Public Law 105-277, Section 323 as amended by Public Law 111-11 Section 3001 or 4001) authorizes the Forest Service to enter into cooperative agreements with willing Federal, Tribal, State, and local governments, private and nonprofit entities, and private landowners to benefit resources within watersheds on NFS lands. Cooperative agreements to conduct activities on non-NFS lands would be for the following purposes:

- Protection, restoration, and enhancement of fish and wildlife habitat and other resources, and/or
- Reduction of risk for natural disaster where public safety is threatened.

This project is based in part on recommendations provided by the Payette Forest Coalition (PFC). The PFC is a collaborative group formed under the *Omnibus Public Land Management Act of 2009* (PL 111-11) and whose recommendations are structured to meet the intent of the *Collaborative Forest Landscape Restoration Act* (CFLRA). The PFC members represent stakeholders from a broad range of interests including; conservation groups, timber industry, recreational groups, and state and county government. The purpose of the Collaborative Forest Landscape Restoration Program (CFLRP) is to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes. The project is consistent with Adams County Multi-Hazard Mitigation Plan (2012) and Valley County WUI Wildfire Mitigation Plan (2004) and recent appendices.

Purpose and Need

The Granite Meadows project is a landscape-scale effort to improve conditions across multiple resource areas. The need for the project is based on the difference between the existing and desired conditions. The desired conditions for this project are based upon the Payette National Forest Plan (USDA Forest Service 2003), and the Watershed Condition Framework (USDA Forest Service 2011). The need for the project is based on the difference between the existing and desired conditions (see Appendix 1).

The purpose of and need for Granite Meadows Project includes:

- Moving vegetation toward the desired conditions defined in the Forest Plan and the most recent science addressing restoration and management of wildlife habitat, with an emphasis on addressing the need to:
 - Reduce the risk of uncharacteristic and undesirable wildland fire, with an

- emphasis on restoring and maintaining desirable plant community attributes including fuel levels, fire regimes, and other ecological processes.
- Increase the diversity and resilience of the landscape with an emphasis on:
 - o promoting and maintaining early seral and fire resistant tree species (e.g. whitebark pine, aspen, western larch, and ponderosa pine) and
 - managing the structure, composition, density, and spatial pattern of forested vegetation closer to the desired conditions in the Forest Plan.
- Maintain and promote dry, lower elevation, large tree, and old forest characteristics for the associated wildlife species with a focus on the processes, function, patch size, and diversity of forested habitats.
- Improve wildlife habitat for species of greatest conservation concern.
- Manage vegetation to achieve authorized recreation resource objectives in the project. Where possible or required due to other law regulation or policy, vegetation management activities should also be designed to aid in fuels, vegetation, and wildlife management objectives.
- Supporting the development of fire-adapted rural communities to address the need to:
 - Create fuel conditions that provide firefighters a higher probability of successfully suppressing fire in the wildland urban interface by reducing potential fire behavior near values at risk (e.g., homes, communication towers, and power lines) and primary ingress/egress routes, essential to firefighter access and the public.
 - Create conditions where local landowners are potentially less reliant on suppression forces.
- Providing for an efficient NFS transportation network and address the need to reduce roadrelated negative effects to resources with a focus on:
 - Identifying the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands.
 - Maintaining and rehabilitate roads and trails.
 - Decommissioning unneeded roads.
 - Identifying opportunities to reduce road-related degrading effects to help achieve other resource objectives such as riparian function, elk security, and fish habitat.
- Moving all subwatersheds within the project area toward the desired conditions for soil, water, riparian, and aquatic resources (SWRA) as described in the Forest Plan and the Watershed Condition Framework (WCF; USDA 2011) and address the need to:
 - Reduce sedimentation and other road related impacts across the project area, and restore riparian vegetation and floodplain function.
 - Improve fish habitat connectivity and hydrologic function with culvert replacements.
- Implementing site-specific streambank and wetland restoration activities where stream channels, wetlands, or riparian areas are in a degraded condition.
- Managing recreation use with a focus on improving system trails, addressing unauthorized trails, improving infrastructure, minimizing the potential for conflicting use and addressing

- risk to forest users. There is also a need to effectively manage areas experiencing detrimental impacts from dispersed or unauthorized recreation.
- Contributing to the economic vitality of the communities adjacent to the Payette National Forest.

Proposed Action

Vegetation and Fuel Treatments

Decades of fire suppression, forest management (*e.g.* logging), livestock management (*e.g.* grazing), insect and disease outbreaks, and other factors have substantially altered forest structure, composition and spatial pattern (Stine *et al.* 2014, Franklin *et al.* 2013, Belsky and Blumenthal 1997; Perry *et al.* 2011; Keane *et al.* 2017; Perkins *et al.* 2016) in the western United States and in the project area. Within the project area, these altered conditions have led to: increased susceptibility of undesired and uncharacteristic wildfires; species composition, structure, density that have departed from desired conditions; and an increased insect and disease susceptibility.

A mix of vegetative treatments are proposed to: reduce fire hazard in the Wildland-Urban Interface (WUI) (Figure 4); improve the resilience and resistance to disturbance (such as wildfire, balsam wooly adelgid, white pine blister rust); minimize the potential for movement of insects and disease across the landscape (e.g. from National Forest System lands onto private or vice versa); maintain and/or enhance recreation opportunities (such as enhancement of skiing and safety at Brundage Mountain resort); restore forest structure (tree size class and spatial pattern), species composition, and tree density; and/or improve wildlife habitat for the species of greatest conservation concern within the project area.

Vegetative treatments include: commercial treatments; non-commercial thinning; prescribed fire; and associated actions. The objectives of treatments would be to move the project area toward the desired conditions (see below), and some may also contribute revenue from stumpage value. Other treatments represent a restoration investment (cost) that would modify stand structure or composition in order to achieve a desired conditions.

These proposed treatments are designed to respond to the project Purpose and Need and are based on the differences between the existing and desired conditions (see Appendices 1, 3, and 4):

- Maintain and promote development of fire resilient, large tree size class stands containing
 predominantly early seral tree species (ponderosa pine, Douglas-fir, quaking aspen, and
 western larch) with low canopy cover in Potential Vegetation Groups (PVGs) and 2 and 5,
 emphasizing creation/retention of old forest characteristics.
- Maintain or re-establish fire resilient stands containing a preponderance of early seral tree species (western larch, quaking aspen, ponderosa pine, and Douglas-fir) in areas where they have been, or are at risk of being, extirpated in PVG 6, 7, and 8, emphasizing creation/retention of old forest characteristics.
- Manage patch sizes to more closely represent historic patch size and pattern as identified
 from historic maps and aerial photography, with the goal of creating a landscape which is
 more resilient to large scale, stand replacing wildfires while maintaining old forest
 characteristics in PVGs 6, 7, 8, 9, and 10. In addition, emphasize regenerating species other
 than subalpine fir in areas currently, or anticipated to be, impacted by the balsam woolly
 adelgid.

- Maintain or reestablish whitebark pine in conditions that are resistant and resilient to wildfire, bark beetles, and white pine blister rust.
 - Also consider treating areas immediately adjacent to whitebark pine to create a mosaic of patch sizes and age classes that would reduce the risk of crown fire impacting the whitebark pine communities.
- Where the above treatments occur within the WUI (see Figure 4) they would be designed to
 be mutually beneficial to meeting both restoration and WUI objectives when possible, these
 treatments would emphasize managing for: reductions in ground, ladder, and canopy fuels,
 especially in closer proximity to values at risk (homes and other improvements).
 - When WUI treatments would not be mutually beneficial to restoration objectives, WUI objectives would receive priority and be designed to improve the ability to manage wildfire by reducing the potential for extreme fire behavior (flame lengths greater than 4 to 8 feet, torching, and crowning) in close proximity to values at risk.
- Where treatments occur in high use and developed recreation areas (e.g. campgrounds, ski areas), treatments would be designed to emphasize recreation objectives. When possible, treatments would be designed to be mutually beneficial to recreation, WUI, and restoration objectives.

Treatment areas and acreages are based on best available information and are subject to change upon further ground verification.

Treatments would occur within some riparian conservation areas (RCAs) where necessary to meet the Purpose and Need (Appendix 3); RCA treatments would incorporate mitigation measures to address potential effects to soil, water, riparian, and aquatic resources.

Commercial Treatments

Approximately 25,000 acres of mechanical commercial vegetative treatments are proposed on FS lands. Land identified as available for commercial treatments is shown in Figure 2. Commercial treatments would depend upon availability of commercial sized trees and access for harvesting equipment. Both even and uneven aged silvicultural systems (Helms 1998). This would include intermediate treatments (e.g. commercial thin), group selection with reserves, and regeneration treatments (e.g. modified shelterwood with reserves and patch cuts with reserves) depending on stand conditions and species composition. All commercial treatment areas may also have non-commercial thinning and prescribed fire treatments occur as described below.

Trees would be removed for sawlogs, biomass, firewood or other forest products. Trees would generally be removed with the limbs and tops attached (*i.e.*, whole tree yarding logging method) or could be processed in place. Where not needed to meet coarse woody debris requirements, limbs and tops of harvested trees may be used as biomass, or other products, where practical. Harvest systems may include ground-based, skyline, tethered, and helicopter.

Non-Commercial Thinning

Non-Commercial Thinning (NCT) would be considered in all areas proposed for commercial treatments and prescribed fire and would not exceed 40,000 acres of NFS lands and up to 8,000 acres of non-NFS lands using cooperative agreements (*i.e.*. the Wyden Authority). These treatments are dependent upon landowner desires and approval. See "Treatments on Private and State Lands within the Project Area" section below. This would consist of cutting or masticating trees generally less than eight to ten inches DBH and pruning of residual trees where appropriate. Mastication may be used within plantations, commercially harvested areas, and within the WUI.

Prescribed Fire

Up to 78,000 acres of NFS and non-FS lands would be treated with prescribed fire over the next 20 years to restore vegetation and fuel conditions, improve wildlife habitat, and promote the development of fire-adapted communities (Figure 3). Approximately 500 to 10,000 acres of fire would be applied annually. Ignitions would be by hand or helicopter.

A mosaic application of fire would be re-introduced to approximately 75 percent of primary target acres, and 50 percent of secondary target acres.

- Primary target acres include stands with historically high fire frequencies and lower severities (grasslands under 6,500 feet elevation and stands dominated by seral species such as ponderosa pine, Douglas-fir, and western larch (PVGs 1-6)).
- Secondary target acres include stands with historically moderate to longer fire frequency and mixed to high severities stands comprised of both seral and non-seral species (PVGs 7-11).

Maintenance burning (burning after initial application of fire) would occur as necessary (e.g. as often as every 5-20 years in fire regimes with historically frequent fire return intervals) to maintain desired conditions. Prescribed burning operations would occur any time of year when conditions permit, typically spring (April, May, June) and fall (August, September, October). Prescribed fire may be applied prior to commercial activities.

Targeted Livestock Grazing

Opportunities to use targeted livestock grazing to reduce fine fuels within the WUI would be explored. Targeting grazing is the application of a specific kind of livestock (e.g. sheep, goats, cows, and/or horses) at a determined season, duration, and intensity to accomplish a defined vegetation goal, including to reduce grass and shrub fuels.

Associated Actions

A number of activities associated with implementing these vegetative and fuel treatments are necessary. These include:

Commercial harvest-related road maintenance and use - Road maintenance includes road surface blading, ditch cleaning, installation of drainage features (e.g., rolling dips), hardening soft spots, replacing culverts, realignment of short road segments to minimize resource impacts, and removing roadside brush to improve visibility and safety for hauling forest products.

Cone collection – In order to reforest early seral species it is necessary to have seed available for the following species: western larch, Douglas-fir, ponderosa pine, and whitebark pine. Cone collection would occur for these species which would be completed by either climbing (for whitebark pine, western larch and Douglas-fir) or felling (for western larch and Douglas-fir).

Coordination with existing permittees – coordination with existing grazing permittees on grazing programs would occur within the project area to meet the purpose and need of reducing the risk of uncharacteristic and undesirable wildland fire (e.g. resting/rotating pastures to allow for prescribed burning).

Temporary roads - Authorized roads needed to complete vegetation treatments that are identified during sale layout, approved by the Forest Service prior to construction, and decommissioned after project use.

Fireline construction — Existing barriers to fire spread (natural and man-caused, from streams and barren ridgelines to roads and trails) would be utilized where possible to contain prescribed burns within specified boundaries. In areas where existing barriers are insufficient to control fire spread, fire lines would be constructed. Hand or machine-constructed fire line would be limited only to areas where necessary. The integrity of existing trails and roads would be considered in the application of fire and any damage caused by these actions would be repaired.

Rock pits - Existing and proposed rock pits within and adjacent to the project area would be used to provide road gravel, pit-run, and/or riprap.

Slash treatment - After commercial treatments and/or non-commercial thinning, slash reduction would include pile burning, hand piling and burning, lop and scatter, mastication, broadcast/underburning, and/or removal.

Site preparation - After the harvest activities are completed and prior to planting in proposed areas, site preparation may be completed either by prescribed burning, mastication, or hand scalping. This would be completed to reduce competition to seedlings from brush and grass.

Planting - Planting of native seedlings on proposed regeneration treatments would be completed as necessary to meet desired stocking levels and species compositions. The species mix would depend on elevation and site conditions.

Treatments on Private and State Lands within the Project Area

Through Wyden Authority agreements between the US Forest Service, willing private landowners, county governments, and Idaho Department of Lands (*i.e.*, those identified within the project area boundary), treatments may include non-commercial thinning, prescribed fire, targeted grazing, brush disposal, planting and seeding of native vegetation, watershed improvements (*e.g.*, culvert replacements and stream stabilization), and road repair. Mutual agreements would seek to:

- Reduce the risk of uncharacteristic and undesirable wildland fire
- Promote more resilient forests
- Promote fire-adapted communities
- Improve watershed conditions

Actions proposed as part of this project would comply with all laws applicable to management of State and Private land. Agreements under the Wyden Authority would not restrict or exclude these land owners from managing or implementing other additional activities on their lands. Funding for activities outside the scope or purpose authorized under the Wyden Authority would have to be funded by other sources.

Watershed Improvement and Restoration Treatments National Forest System Road Treatments

Approximately 30-35 miles of NFS roads are proposed for decommissioning (removed from the NFS) within the project area, establishing a minimum road system (MRS) for safe and efficient travel and for administration, utilization, and protection of NFS lands. Roads identified for decommissioning would receive treatment that can range from blocking the entrance to full obliteration. NFS road management actions proposed for this project were developed using the McCall and New Meadows Ranger District Travel Analysis recommendations. These district-wide general recommendations were completed in 2014 and 2015, respectively. The Granite Meadows interdisciplinary team (IDT) refined these broad recommendations and used project specific data to develop a MRS proposed action.

Objectives of road treatments would be to reduce long-term maintenance costs, improve elk security habitat (Forest Plan, Appendix E), reduce overall road density and road-related impacts to water quality and fish habitat, improve habitat for terrestrial and aquatic species, and improve long-term soil productivity.

Within the Brown Creek drainage, a tributary to Hard Creek which is an Aquatic Conservation Strategy (ACS) priority subwatershed (USDA Forest Service 2003), approximately 5 miles of NFS road would be decommissioned, reducing NFS road density. NFS road decommissioning and unauthorized route restoration is designed to improve the Brown Creek drainage of the ACS priority subwatershed toward the desired condition. The Mud Creek and Goose Creek subwatersheds are identified as functioning at unacceptable risk (FUR) under the WCF, and would also be moved toward the desired conditions by decommissioning NFS roads and additional unauthorized routes, reducing overall road density and road-related effects.

NFS roads proposed to remain on the landscape as part of the MRS would be maintained or improved to reduce sediment production. Specific changes to public access (including seasonal closures) and Forest System Road maintenance levels would also be proposed and evaluated through this NEPA analysis. Road closures would be strategically located to maximize effectiveness.

Unauthorized Route Treatments

All unauthorized routes not needed for future management would also be evaluated for some level of restoration treatment as required by FSM 7734.01 and 7734.02. It is anticipated that between 50 and 75 miles would be treated. Routes would be evaluated for treatment based on existing and potential adverse impacts.

Streambank and Wetland Restoration

Site-specific streambank and wetland restoration actions would occur in Sater Meadows, Mud Creek, or other areas across the project area where stream channels, wetlands, or riparian areas are in a degraded condition. Actions to improve stream channels, riparian habitat, and wetlands may include: streambank stabilization, minor channel re-alignment, fence reconstruction, planting native vegetation, placement of instream or streambank structures such as (but not limited to): rock, large woody debris, beaver dam analogs (BDAs), and barriers to prevent unauthorized motorized travel in sensitive areas.

Fish Passage Improvements

Five NFS road/stream crossings have been identified in the project area to improve fish passage and improve hydrologic connectivity (Figures 5 and 6). One crossing in the Round Valley Creek-Little Salmon River subwatershed, two crossings in the Sixmile Creek-Little Salmon River subwatershed, and two crossings in the Upper Goose Creek subwatershed would be replaced with appropriate structures to improve fish habitat connectivity. Crossings would be replaced as road work and project activities occur in these areas to improve fish habitat connectivity, and improve hydrologic connectivity.

Recreation Improvements

To meet the purpose and need for the project, recreation improvements would include:

- Improving the existing trail system by establishing user-created (unauthorized) trails as system
 trails where appropriate, and removing user-created trails that negatively impact watershed
 and soil health.
- Reestablish and/or reroute existing Forest Service trails as needed within the project area.

- Evaluate authorized and unauthorized roads identified for decommissioning for possible conversion to motorized or non-motorized trails.
- Manage or improve dispersed recreation opportunities by hardening and improving sites, closing some sites contributing to soil degradation and erosion, and/or the installation of signage that includes targeted messaging. Areas include, but are not limited to, Granite Lake, Brundage Reservoir, and Sater Meadows. Other areas may be included for treatments as needed.
- Improve existing facilities, this may include:
 - Replacing restrooms at Brundage Reservoir and Granite Lake.
 - Replacing the fishing platform at Brundage Reservoir.
 - o Repairing or replacing the boat ramp at Brundage Reservoir.
- Manage roads (including relocation), post signage, and/or consider closure orders to address
 public safety in areas where conflicting use may occur (e.g. Ecks Flats).
- Oversnow Vehicle Area Closures (Figure 7):
 - Consistent with previous yearly closures, close portions of the Granite Mountain area to oversnow vehicle use not authorized under Special Use Permit (January 15-March 31). Identify parameters or conditions to inform adaptive management of the closure in collaboration with the Winter Recreation Forum.
 - Implement a closure of Bear Basin Nordic Ski area to oversnow vehicle use for safety and to reduce potential for collisions between motorized and non-motorized recreationists, from November 1st through March 31st.
- Improve skier experience and safety through vegetative treatments within the Brundage Mountain Resort's ski area.

The activities listed above would be implemented as time and funding allows.

Public Involvement

Public involvement and input is an important component of the NEPA process for Granite Meadows.

Scoping Period

A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) is expected to be published in the Federal Register on October 31, 2018. To be most helpful please submit your scoping comments within 45 days of the publication of the NOI, and make your comments as specific as possible. A legal notice regarding the scoping process is also expected to be published in the Idaho Statesman (newspaper of record) on October 31, 2018; however, the NOI in the Federal Register initiates the timeframe for the opportunity to comment. Copies of both the NOI and the Idaho Statesman legal notice will be posted to the project web page. The Forest Service is planning to host a public meeting during the scoping period: November 27 at 6:30 p.m. in the Forest Supervisors office (500 N. Mission Street, McCall, Idaho 83638). More meetings may be scheduled as well. Please visit the project website for the most current information (http://www.fs.usda.gov/project/?project=54029).

How to Comment

Comments may pertain to the nature and scope of the environmental, social, and economic issues, and possible alternatives to the proposed action. Your comments will help us refine the proposal and identify preliminary issues, interested and affected persons, and possible alternatives. Comments received in response to this request are part of the project record and will be available for public inspection on the "Public Comment/Objection Reading Room" on the project web site: http://www.fs.usda.gov/project/?project=54029. Written, facsimile, hand-delivered, and electronic

comments concerning this project will be accepted. Send written comments to Keith Lannom, Forest Supervisor, 500 N. Mission Street, Building 2, McCall, Idaho 83638. Comments may also be sent via facsimile to 208-634-0744.

Comments may also be submitted through the Granite Meadows Project web page at http://www.fs.usda.gov/project/?project=54029. To submit comments using the web form select "Comment on Project" under "Get Connected" on the right panel of the project's web page. Comments must have an identifiable name attached or verification of identity will be required. A scanned signature may serve as verification on electronic comments. The office hours for those submitting hand-delivered comments are 8 a.m. to 4:30 p.m. Monday through Friday, excluding holidays. Oral comments may also be provided at the New Meadows Ranger District Office during normal business hours via telephone 208-347-0300 or in person.

Establishing Eligibility to Object

The project implements land management plans and is not authorized under the Healthy Forest Restoration Act and is subject to 36 CFR 218.7 parts (a) and (b). In order to be eligible to file an objection, specific written comments related to the project must be submitted during scoping, by the comment period on the draft EIS in accordance with procedures in 40 CFR 1506.10, or during any other periods public comment is specifically requested on this EIS (36 CFR 218.5). Individual members of organizations must have submitted their own comments to meet the requirements of eligibility as an individual. Objections received on behalf of an organization are considered as those of the organization only. Names and addresses of those who comment and/or file objections will become part of the public record.

References

Barrett, S.W. 1987. Fire History of the Rapid River Drainage, New Meadows Ranger District, Payette National Forest. Systems for Environmental Management. On file: P.O. Box J, New Meadows Ranger District, Payette National Forest. 9p.

Barrett, S.W. 1994. Fire Regimes on the Payette National Forest, Bear Analysis Area, Final Report. Purchase Order 43-0256-3-0755. On file: P.O. Box J, New Meadows Ranger District, Payette National Forest. 18p.

Belsky, A.J. and D.M. Blumenthal. 1997. Effects of livestock grazing on stand dynamics and soils of upland forests of the Interior West. Conservation Biology, Volume 11, Number 2, pp. 315-327.

Franklin, J.F., K.N. Johnson, D.J. Churchill, K. Hagmann, D. Johnson, and J. Johnson. 2013. Restoration of dry forest in eastern Oregon: a field guide. The Nature Conservancy, Portland, OR. 202p.

Franklin, J.F., and K.N. Johnson. 2013. Ecologically based management: a future for federal forestry in the Pacific Northwest. Journal of Forestry 111(6):429–432.

Helms, J.A. 1998. The Dictionary of Forestry. Society of American Foresters.

Keane, Robert E.; Holsinger, Lisa M.; Mahalovich, Mary F.; Tomback, Diana F. 2017Restoring whitebark pine ecosystems in the face of climate change. Gen. Tech. Rep. RMRS-GTR-361. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 123 p.

Omnibus Public Land Management Act of 2009 (PL 111-11).

Perkins, D.L., R.E. Means, and A.C. Cochrane. 2016. Conservation and management of whitebark pine ecosystems on Bureau of Land Management Lands in the Western United States. Technical Reference 6711-1. Bureau of Land Management, Denver, CO.

Perry, D.A., P.F. Hessburg, C.N. Skinner, T.A. Spies, S.L. Stephens, A.H. Taylor, J.F. Franklin, B. McComb, and G.M. Riegel. 2011. The ecology of mixed severity fire regimes in Washington, Oregon, and Northern California. Forest Ecology and Management 262 (2011), pp. 703–717. Potyondy, J.P. and Geir, T.W. Forest Service Watershed Condition Classification Technical Guide. USDA 2010. Draft.

Sanders, B. 1998. Hazard Risk Assessment for Ponderosa Pine Dominated Fire Regimes. Payette National Forest. On file: P.O. Box J, New Meadows Ranger District. Payette National Forest. 26p.

Stine, P., P. Hessburg, T. Spies, M. Kramer, C.J. Fettig, A. Hansen, J. Lehmkuhl, K. O'Hara, K. Polivka, P. Singleton, S. Charnley, A. Merschel, and R. White. 2014. The ecology and management of moist mixed-conifer forests in eastern Oregon and Washington: a synthesis of the relevant biophysical science and implications for future land management. General Technical Report. PNW-GTR-897. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, OR. 254 p.USDA Forest Service 2003. Payette National Forest Land and Resource Management Plan. Payette National Forest, McCall Idaho.

USDA Forest Service 2011. Watershed Condition Framework. Intermountain Region. Report # FS-977, May 2011.

Appendices

Appendix 1. Existing vs. Desired Condition of the Project Area

Forested Vegetation

Vegetation within the project area is comprised of both forested and non-forested vegetation types. Table A-1 identifies the amount of different groups of vegetation in the project area. The classification system utilized in the Forest Plan is Potential Vegetation Groups (PVGs). An explanation and definitions of PVG can be found in Appendix A of the Forest Plan.

Table A-1. Project Area Potential Vegetation Groups

PVG	Description	USFS Acres	% of USFS	State Acres	Private Acres	Total Acres	% of Total
2	Warm Dry Douglas-fir/Moist Ponderosa Pine	6,120	8%	890	2,648	9,658	12%
5	Dry Grand Fir	9,172	13%	1,777	764	11,714	14%
6	Moist Grand Fir	17,695	25%	1,757	1,438	20,890	25%
7	Warm Dry Subalpine Fir	15,797	23%	712	19	16,529	20%
8	Warm Moist Subalpine Fir	5,332	8%	202	5	5,539	7%
9	Hydric Subalpine Fir	5,656	8%	165	2	5,824	7%
10	Persistent Lodgepole Pine	1,030	1%	66	26	1,122	1%
11	High Elevation Subalpine Fir	3,388	5%	14	0	3,402	4%
	Grass/Shrub	3,759	5%	1,432	850	6,042	7%
	Other ¹	1,878	3%	13	34	1,925	2%
	TOTAL Forested (PVGs 1-11)	64,188	92%	5,583	4,904	74,677	90%
	Approximate TOTAL	70,000	100%	7,000	6,000	83,000	100%

Tables A-2 through A-4 display the differences in forested areas by Potential Vegetation Group (PVG) for tree size class, canopy closure and species composition based on the desired conditions specified in the Forest Plan. An explanation and definitions of desired tree size class, desired canopy closure and desired species composition can be found in Appendix A of the Forest Plan. PVGs 2, 5, 6, 7, 8, 9, 10, and 11 are displayed as they account for 99 percent of the forested landscape within USFS lands within the project area.

Decades of fire suppression, forest management (*e.g.* logging), livestock management (*e.g.* grazing), insect and disease outbreaks, and other factors have substantially altered forest structure, composition and spatial pattern (Stine *et al.* 2014, Franklin *et al.* 2013, Belsky and Blumenthal 1997; Perry *et al.* 2011; Keane *et al.* 2017; Perkins *et al.* 2016) in the western United States. These past activities have led to a discrepancy between the current and desired vegetative conditions include forested conditions with:

- Tree size class distribution not in alignment with the desired conditions established in the Forest Plan;
- A general excess of areas of higher than desired canopy cover;
- Less early seral and fire tolerant species than desired.

Tables A-2 and A-3 display the discrepancies between desired and existing tree size class and canopy cover class in the large tree size class. Table A-4 provides a summary of the discrepancies by PVG.

Table A-2. Current versus Desired Tree Size Class¹

PVG	Tree Size	Desired % Range	Curren t %	Desired Acres	Current Acres	Status
	G/F/S/S (<4.5' height)*	4-5%	4%	233-292	264	On Target
	Saplings (0.1-4.9" DBH)	3-7%	1%	175-408	85	Deficit
2	Small (5.0-11.9" DBH)	5-21%	9%	292-1,224	521	On Target
	Medium (12.0-19.9" DBH)	7-35%	65%	408-2,041	3,967	Surplus
	Large (≥20.0" DBH)	59-80%	21%	344-4,664	1,282	Deficit
	G/F/S/S	3-4%	4%	273-364	413	Surplus
	Saplings	3-7%	1%	273-637	53	Deficit
5	Small	4-22%	8%	364-2,001	688	On Target
3	Medium	7-30%	41%	637-2,728	3,806	Surplus
	Large	66-84%	46%	6,002- 7,639	4,213	Deficit
	G/F/S/S	7-8%	6%	1,239- 1,416	1,087	Deficit
	Saplings	7-9%	2%	1,239- 1,593	395	Deficit
6	Small	11-27%	9%	1,946- 4,778	1,543	Deficit
	Medium	18-36%	43%	3,185- 6,370	7,673	Surplus
	Large	28-56%	40%	4,955- 9,909	6,997	On Target
	G/F/S/S	7-16%	5%	1,106- 2,528	738	Deficit
	Saplings	11-15%	0%	1,738- 2,370	31	Deficit
7	Small	21-22%	2%	3,317- 3,475	303	Deficit
	Medium	32-36%	58%	5,055- 5,687	9,115	Surplus
	Large	20-21%	36%	3,159- 3,317	5,611	Surplus
	G/F/S/S	15-17%	3%	800-906	150	Deficit
	Saplings	11-15%	0%	587-800	19	Deficit
8	Small	22-23%	2%	1,173- 1,226	115	Deficit
•	Medium	28-29%	33%	1,493- 1,546	1,763	Surplus
	Large	20-21%	62%	1,066- 1,120	3,285	Surplus
	G/F/S/S	13%	22%	735	1,242	Surplus
	Saplings	8-15%	1%	452-848	78	Deficit
9	Small	17-22%	10%	962-1244	565	Deficit
	Medium	25-29%	28%	1,414-	1,584	On Target

				1,640		
	Large	31-37%	39%	1,753- 2,093	2,186	Surplus
	G/F/S/S	16-23%	1%	165-237	5	Deficit
10	Saplings	11-16%	1%	113-165	11	Deficit
10	Small	46-48%	31%	474-494	318	Deficit
	Medium and Large **	20%	68%	206	695	Surplus
	G/F/S/S	9-15%	12%	305-508	407	On Target
	Saplings	14-15%	0%	474-508	0	Deficit
11	Small	19-22%	0%	644-745	0	Deficit
	Medium	22-38%	81%	745-1,287	2,732	Surplus
	Large	20-27%	7%	678-915	248	Deficit

 $^{{\}color{blue} *}$ G/F/S/S is defined as the Grass/Forb/Shrub/Seedling tree size class.

See Forest Plan Appendix A for definitions of tree size class.

The tree size class is determined by the largest trees in a stand, not the most abundant tree size. In the case of determining tree size class, the trees in the largest tree size class that contain ≥10 percent non-overlapping canopy cover determine the tree size class.

Table A-3. Current versus Desired Canopy Closure in Large Tree Size Class stands¹.

PVG	Low Canopy Cover (10-39%)			Moderate Canopy Cover (40-69%)			High Canopy Cover (≥70%)		
	Desired	Current	Status	Desired	Current	Status	Desired	Current	Status
2	74-94%	14%	Deficit	6-26%	64%	Surplus	0%	22%	Surplus
5	25-45%	3%	Deficit	55-75%	49%	Deficit	0%	48%	Surplus
6	0-20%	2%	On Target	80-100%	39%	Deficit	0%	59%	Surplus
7	0-14%	36%	Surplus	86-100%	44%	Deficit	0%	20%	Surplus
8	0%	28%	Surplus	51-71%	43%	Deficit	39-49%	29%	Deficit
9	0%	16%	Surplus	51-71%	49%	Deficit	39-49%	34%	Deficit
10	0%	0%	On Target	81-100%	0%	Deficit	0-19%	100%	Surplus
11	0-16%	77%	Surplus	84-100%	23%	Deficit	0%	0%	On Target
1-Desi	red values are	derived fro	m the Payette Fo	rest Plan.					

^{**} The Forest Plan combines the medium and large tree size class for PVG 10. See Appendix A, page A-3, Table A-3

¹ – Desired values are derived from the Payette Forest Plan and the draft Wildlife Conservation Strategy.

Table A-4. Variance of Desired and Existing Conditions

PVG	Tree Size Class (TSC)	Canopy Cover Class (CCC)	Species Composition
	Considerations	Considerations	Considerations
2	Excess Medium TSC. Short in Sapling and Large TSCs.	Excess in Moderate and High CCCs. Short in Low CCC.	Insufficient stocking of PIPO. Excessive stocking of PSME, PIEN and ABGR.
5	Excess G/F/S/S and Medium TSC. Short Sapling and Large TSCs.	Excess in High CCC. Short in Low and Moderate CCCs.	Insufficient stocking of PIPO. Excessive stocking of PIEN and ABGR.
6	Excess Medium TSC. Short in G/F/S/S, Sapling, and Small TSCs.	Excess in High CCC. Short in Moderate CCC.	Insufficient stocking of PICO, PIPO, LAOC and PSME. Excessive stocking of POTR, PIEN, ABGR, and ABLA.
7	Excess Medium and Large TSCs. Short in G/F/S/S, Sapling, and Small TSCs.	Excess in Low and High CCCs. Short in Moderate CCC.	Insufficient stocking of POTR, PICO, and PSME. Excessive stocking of PIEN, ABGR, and ABLA.
8	Excess Medium and Large TSCs. Short in G/F/S/S, Sapling, and Small TSCs.	Excess in Low CCC. Short in Moderate and High CCCs.	Insufficient stocking of PICO, LAOC, and PSME. Excessive stocking of PIEN, ABGR, and ABLA.
9	Excess G/F/S/S and Large TSCs. Short in Sapling and Small TSCs.	Excess in Low CCC. Short in Moderate and High CCCs.	Insufficient stocking of PICO. Excessive stocking of PIEN, ABGR, and ABLA.
10	Excess Medium and Large TSCs. Short in G/F/S/S, Sapling, and Small TSCs.	Excess in High CCC. Short in Moderate CCC.	Insufficient stocking of PICO. Excessive stocking of PIEN, ABGR, and ABLA.
11	Excess Medium TSC. Short in Sapling, Small, and Large TSCs.	Excess in Low CCC. Short in Moderate CCC.	Insufficient stocking of PIAL. Excessive stocking of PIEN and ABLA.

POTR = quaking aspen; PIAL = whitebark pine; LAOC = western larch; PIPO = ponderosa pine;

PSME = Douglas-fir;
PICO = lodgepole pine;
PIEN = Engelmann spruce;
ABGR = Grand fir;

ABLA = subalpine fir

Fire and Fuels

Decades of forest management (e.g. logging), fire suppression, livestock management (e.g. grazing), insect and disease outbreaks, and other factors have substantially altered forest structure, composition and spatial pattern (Stine et al. 2014, Franklin et al. 2013, Belsky and Blumenthal 1997; Perry et al. 2011) has led to:

- An increase in canopy densities;
- A decrease in canopy base heights (height to live crown);
- A decrease in the composition of fire-resilient tree species;
- An increase in ground and surface fuels.

As a result, vegetation and fuel conditions are outside the historic range of natural conditions. Historically the drier forest types (PVGs 1, 2, and 5) of the project area consisted of a diverse understory of grasses, forbs, and low shrubs with a large-diameter fire-resilient overstory. This condition was maintained over time by frequent low-intensity fires. The moister, mixed severity fire regimes of PVGs 3, 4, 6, 7, and 11 occurred in the Douglas-fir, grand fir, and white bark pine communities.

Table A-6. Departure from Historic Fire Return Interval in forested areas on NFS lands.

			Range of	Average Historic	
Historic Fire Regimes	PVGs	FS Acres	Historic Fire Return	Fire Return	Missed
nistoric rire kegiiiles	PVGS	rs Acres	Intervals (years)	Intervals (years)	Intervals
Non-Lethal	1, 2, 5	15,214	5-25	15	6.8
Mixed Severity I	3, 4, 6	17,773	5-70	37.5	2.7
Mixed Severity II	7, 11	19,185	70-300	185	0
Stand Replacement	8, 9, 10	12,018	100-400	250	0

Due to suppression efforts the project area has not experienced many significant wildfires event in the last decade. The project area experienced 317 fire starts from 1970 to 2017, an average of seven fire starts per year. Of these starts, 314 (99%) were kept at ten acres or less. Many starts have occurred adjacent to the project area, but were also suppressed. Hence, fires were not allowed to move into the project area from the surrounding areas. The largest wildfire on record within the project area, the Goose Fire, occurred in 1996 and grew to 70 acres. From 2012 to 2017, 4,988 acres of prescribed fire has been implemented within the project area (approximately 831 acres per year). Between fire response activities (approximately 1 acre annually) and the application of prescribed fire (831 acres annually), the project area experiences approximately 832 acres of fire per year.

Approximately 51 percent of the forested acres on NFS lands in the project area have missed two or more fire return intervals. The extent to which a system has departed from historic conditions influences the extent to which key ecosystem components, critical to the integrity of the ecosystem, are altered. Many of the Non-lethal and Mixed-Severity I Fire Regimes acres have transitioned to Mixed-Severity II and Stand Replacement Regimes in the project area. This is consistent with the research by Sanders (1997), and Barrett (1987 and 1994) on the Payette NF indicating a shift in the fire regimes. This shift in fire regimes indicates that a higher percentage of the project area acres would likely burn at higher severities as well as larger patch sizes given a wildfire event. Uncharacteristic fire effects threaten desirable plant communities, ecological processes and the ability to protect life, investments, and other valuable resources.

Soil, Water, Riparian, and Aquatic Resources

Management Direction

The 2003 Forest Plan developed the Aquatic Conservation Strategy (ACS) to provide direction to maintain and restore characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats (Forest Plan, Appendix B, pages B-49-B-63). Priority watersheds were identified for active restoration under the ACS. Within the project area, the Brown Creek drainage is part of a larger ACS priority subwatershed (lower Hard Creek).

Included in the ACS is the Watershed and Aquatic Recovery Strategy (WARS), which identifies subwatershed restoration type (WARS class) and prioritization. Subwatershed ratings for the project area are displayed in Table A-7. The Watershed Condition Framework (Potyondy and Geier, 2010) established a consistent, comparable, and credible process for improving watershed conditions on National Forests and Grasslands. The WCF identified 3 condition classes related to the degree or levels of watershed functionality or integrity: Class 1-Functioning Properly, Class 2- Functioning at Risk, and Class 3- Impaired. WCF ratings for the project area are located in Table A-7.

Current Condition

Restoration priorities from the Forest Plan and WCF ratings for the project area are displayed below (Table A-7). Many project area subwatersheds have road densities that are contributing to reductions in long-term soil productivity, road-related sediment contributing to stream channels, negative effects to floodplains and riparian conservation areas (RCAs), and changes to hillslope hydrology due to the intersection of subsurface water by cutslopes. Effects to channel stability, peak flows, and stream channel resiliency are likely due to past harvest, livestock grazing, and roads.

Table A-7. Forest Plan Restoration Priority and WCF Rating

6th Field Subwatershed	Subwatershed or Drainage (as identified by 2003 Forest Plan)		Watershed Condition Framework Rating (as identified by 6th Field subwatershed)	
Box Creek-North Fork Payette River	Copet-Box	Active/Moderate	Functioning at Risk (Class 2)	
Payette Lake	Payette Lake	Active/Moderate	Functioning Properly (Class 1)	
Hartsell Creek – North Fork Payette River	Middle North Fork Payette River	Active/High	No Rating	
Lower Goose Creek-Little	Little	Active/Moderate	Functioning at Risk (Class 2)	
Salmon River	Lower Goose	Active/Moderate	runctioning at risk (Class 2)	
	Little Goose Creek	Active/Moderate		
Upper Goose Creek	Upper Goose Creek	Active/Moderate	Impaired Function (Class 3)	
Sixmile Creek-Little Salmon River	Sixmile-Threemile	Active/Moderate	Functioning at Risk (Class 2)	
Lower Meadows Valley-Little Salmon River	Middle Little Salmon	Active/Moderate	Functioning at Risk (Class 2)	
Hard Creek	Lower Hard	Active/High Identified Priority Watershed	Functioning at Risk (Class 2)	
Elk Creek-Little Salmon River	Trail	Active/High	Functioning Properly (Class 1)	
Mud Creek	Lower Mud	Active/Moderate	Impaired Function (Class 2)	
iviuu Creek	Upper Mud Creek	Active/Moderate	Impaired Function (Class 3)	
Round Valley Creek-Little Salmon River	Round Valley Creek	Active/Moderate	Functioning at Risk (Class 2)	

Desired Condition

The desired condition within the project area for soil, water, riparian, and aquatic resources is to improve overall watershed function and integrity. This would include reducing accelerated sediment and other ecological impacts from roads, improving stream bank stability and resiliency, fish passage at road-stream crossings, improving long-term soil productivity, and improving riparian vegetation and floodplain function.

Appendix 2. Riparian Conservation Area Treatments

Delineation of Riparian Conservation Areas

Riparian Conservation Areas (RCAs) are stream and wetland protection zones delineated for the protection of riparian-dependent resources. Management activities are subject to specific Forest Plan goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where riparian functions and ecological processes are crucial to maintenance of the area's water quality, sediment regime, large woody debris, nutrient delivery system, and associated biotic communities and habitat.

Appendix B of the Forest Plan outlines a step-down process for delineation of RCAs on perennial and intermittent streams, ponds, lakes, reservoirs, and wetlands (USDA Forest Service 2003). The RCAs within the project area have been identified utilizing Option 2 (Forest Plan page B-34) delineation method. Forest Plan Option 2 provides a more specific delineation of an RCA boundary using site potential tree heights.

Need for Treatment

Initial project area analysis indicates vegetative treatments (*i.e.* thinning and prescribed burning) in the RCAs would be needed to maintain or move towards the desired vegetative conditions as specified in Appendix A of the Forest Plan and minimize potential fire behavior among values at risk, and also where necessary to meet forest user safety objectives (*e.g.* on Brundage Ski Resort). Based on Forest Plan management direction and other resource concerns a more detailed approach has been applied to develop an RCA treatment proposal that is consistent with management direction, including Appendix B of the Forest Plan and the Aquatic Conservation Strategy (ACS).

Proposed Treatments in RCAs

Based on the purpose and need of the project, some mechanical and prescribed burning treatments are proposed within RCAs. RCA vegetation treatments are not proposed in the Brown and Trail Creek drainages because they are either part of an ACS priority subwatershed or contain ESA-listed steelhead critical habitat (respectively).

Commercial Thinning

Commercial thinning treatments would be designed to ensure that project activities do not degrade current RCA conditions and do not retard the attainment of SWRA desired conditions. All RCA treatments would apply only to upland vegetation that occurs within the outer half of a RCA, and not to riparian vegetation (*i.e.* willow, spruce). This action, on a site specific basis, is consistent with direction for upland vegetation desired conditions and RCAs in Forest Plan Appendices A and B (USDA Forest Service 2003). Refer to recreation exemptions, below.

Vegetation treatments within RCAs would apply lessons-learned from previous similar projects (*e.g.* the Middle Fork Weiser River Project, 2017). RCA treatments would be developed in consultation with the district fish biologist and/or hydrologist to ensure streambank stability, ground cover are considered and riparian function is maintained.

In portions of RCAs where mechanical treatments would not be feasible or deleterious effects to riparian functions and ecological processes (described in the Forest Plan, page B-37) are anticipated, the unit (or portion(s) thereof) would be excluded from treatment.

The following guidelines would be used for RCA commercial treatment layout and implementation. Only upland vegetation in the outer portion of the RCA would be treated (Figure A-3).

- No harvesting would be allowed in the inner half of RCAs. Cutting of individual trees
 within the inner half of RCAs may be approved on a case by case basis but removal of that
 material would not be permitted.
- If unmapped RCAs are discovered during layout or implementation, they may be treated if:
 1) they meet intent of RCA treatments; 2) all Project Design Features and restrictions can be adhered to; and 3) they meet the following criterion:
 - They fall outside of the Brown and Trail Creek drainages.

Exceptions for recreation enhancement and safety are as follows:

 Cutting and removal of all size trees anywhere within the RCA may occur on a limited case by case basis within the Brundage Mountain resort permitted ski area for skier access and/or safety. Design of treatments would be done in consultation with the Brundage operation manager, as approved by the Forest Service Recreation Specialist and a Forest Service Hydrologist.

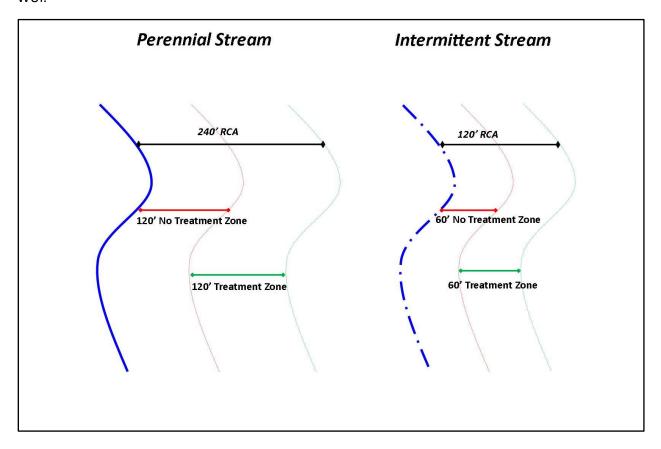
Non-Commercial Thinning

NCT would not occur within RCAs in the Brown Creek and Trail Creek drainages (ACS priority and steelhead critical habitat, respectively). Elsewhere in the project area, NCT would be permitted within the outer portions of RCAs. NCT would not be allowed within 60 feet of intermittent stream channels or 120 feet of perennial stream channels (see Figure A-3). There would be no cutting of riparian vegetation (*i.e.*, spruce, willows) within any RCA in the project area and no machine piling within RCAs.

Exceptions for WUI areas are as follows:

- NCT in RCAs may occur in WUI areas as close as 30 and 60 feet, respectively for intermittent
 and perennial streams. This would be primarily for prescribed fire containment purposes
 along burn block perimeters.
- No machine piling within RCAs; hand piling is allowed within the outer 60 feet of intermittent and outer 120 feet of perennial stream channels.

Figure A-3. Example of NCT and/or Prescribed Fire within Perennial and Intermittent RCAs outside of WUI.



Prescribed Fire Treatments

Direct ignitions would not occur in RCAs in the Brown Creek and Trail Creek drainages. Elsewhere in the project area, direct ignitions would be permitted within RCAs, but not be allowed within 60 feet of intermittent stream channels or 120 feet of perennial stream channels. In order to facilitate containment of prescribed fire, direct ignitions will occur within RCAs along burn block perimeters, but not within 30 feet of stream channels. Fire may back into any RCA within the project area. When applying fire within RCAs, no fire would be directly applied to riparian vegetation (*e.g.*, spruce, willows). The direct ignitions within RCAs would create a mosaic burn pattern.

Appendix 3. Prescribed Fire and Wildland-Urban Interface Treatments

Prescribed Fire

Prescribed fire moves forested and non-forested vegetation towards conditions that more closely represent historic distribution, structure, and function as well as improves our ability to protect the communities and the numerous values within and adjacent to the landscape (i.e., timber, healthy forest, recreation).

Wildland-Urban Interface Treatments

In order to provide suppression forces a higher probability of successfully attacking a wildland fire within intermix or rural condition while creating a safer working environment a combination of non-commercial thinning, commercial treatments, limbing to reduce ladder fuels, piling dead and downed material, mastication, and/or prescribed burning would facilitate the desired condition. More specifically, activities would result in the following:

- Increased canopy base heights to reduce potential for spotting, torching, and crown fire
- Reduced canopy densities to reduce potential for crown fire spread
- Reduced species that are not fire-resilient to promote more fire-resilient stands
- Reduced ground and surface fuel loading and continuity to enable firefighters to have a
 greater chance for success for suppressing fires in this area.

Wildfire mitigation treatment areas are generally one mile from structures (Figure 4). There are approximately 27,300 acres of forested vegetation within this zone (18,700 acres of NFS lands; 4,340 of State lands; and 4,040 acres are private lands). In order to support safe travel for firefighter access as well as to facilitate community member escape from a wildland fire, ingress and egress routes would be treated up to 250 feet on either side of primary routes.

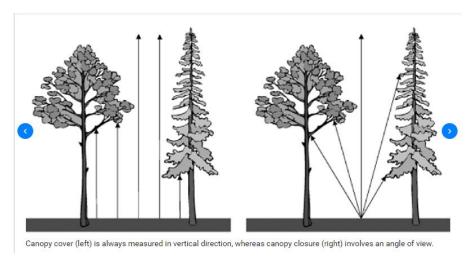
Appendix 4. Glossary and Acronyms Glossary

Advance regeneration-seedlings or saplings that develop or are present in the understory

Aquatic Conservation Strategy (ACS)—"A long-term strategy to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within lands administered by National Forests," page B-48, Forest Plan, 2003 as amended.

Canopy closure—the proportion of the sky hemisphere obscured by vegetation when viewed from a single point.

Canopy cover – the proportion of non-overlapping ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage for all trees excluding trees in the seedling size class (trees less than 4.5 feet tall)



Commercial thin—Any type of thinning that produces merchantable material at least equal to the value of the direct cost of harvesting.

Condition class—The degree of departure from historical fire regimes and vegetation characteristics.

Critical Habitat— Specific areas within a geographical area occupied by a threatened or endangered species, on which are found physical or biological features essential to conservation of the species.

Desired Condition (DC)—A portrayal of the land, resource, or social and economic conditions that are expected in 50-100 years if management goals and objectives are achieved.

Fire regimes— Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects as well, in a given area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured, such as fire return interval.

Fire severity— Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time.

Forest plan—In this document, the Payette National Forest Land and Resource Management Plan (2003).

Forest Road or Trail —A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources (36 CFR 212.1).

Forest transportation Atlas —A display of the system of roads, trails, and airfields of an administrative unit (36 CFR 212.1).

Fuel treatment— Manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control (e.g., lopping, chipping, crushing, piling and burning).

Goal—As Forest Plan management direction, a goal is a concise statement that helps describe a desired condition, or how to achieve that condition.

Ground based logging system – A collection of heavy equipment used to fell, delimb, process and skid trees to a landing. A typical local system is a tracked feller-buncher and grapple skidders. Alternatively, a tracked tong thrower is often used in areas where terrain is not suited for grapple skidding.

Guideline—As Forest Plan management direction, a guideline is a preferred or advisable course of action generally expected to be carried out. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document.

Helicopter logging system –This system typically uses hand falling with a chainsaw, the tree is limbed and bucked in the woods and a helicopter transports logs from the harvest unit to a landing.

IDT (Interdisciplinary Team)—A team of individuals with skills from different disciplines that focus on the same task or project.

Intermediate Treatment-- Any treatment or tending designed to enhance growth, quality, vigor, and composition or the stand after establishment or regeneration and prior to final harvest.

Level I Maintenance—Roads that have been placed in storage between intermittent uses. The period of storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources and to perpetuate the road for future resource management needs (FSH 7709.59).

Long-term road closure—Roads placed in maintenance level 1 and receiving treatments to keep damage to adjacent resources to an acceptable level, and to perpetuate the road to facilitate future management activities. These roads were identified as not needed for project use for more than 30 years. Closure activities could include removing man-made drainage structures, restoring stream channel and banks, providing for drainage (waterbars/outsloping), scarifying, seeding, and fertilizing.

Management Area—A land area with similar management goals and a common prescription, as described in the Forest Plan.

Management direction—Activities that must be carried out to meet the goals of agency management.

Migratory Bird Treaty Act (1918) – Act that establishes Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner,

any migratory bird, included in the terms of this convention... for the protection of migratory birds, or any part, nest, or egg of any such bird." (16 U.S.C. 703)

National Forest System Road - A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority (36 CFR 212.1).

New road construction—Activity that results in the addition of forest classified or temporary road miles (Forest Plan).

Objective—As Forest Plan management direction, an objective is a concise time-specific statement of actions or results designed to help achieve goals. Objectives form the basis for project-level actions or proposals to help achieve Forest goals.

Old forest—A component of the Large Tree Size Class, with the following general characteristics: a variability in tree size that includes old, large trees with signs of decadence, increasing numbers of snags and coarse woody debris, canopy gaps, and understory patchiness. There are two broad types of old forest in the Southwest Idaho Ecogroup area—single-storied and multi-storied. Single-storied old forest is characterized by a single canopy layer of large or old trees. These stands generally consist of widely spaced, shade-intolerant species, such as ponderosa pine and western larch that are adapted to a nonlethal, high frequency fire regime. Multi-storied old forest is characterized by two or more canopy layers, with large or old trees in the upper canopy. These stands can include both shade-tolerant and shade-intolerant species, and are typically adapted to a mixed regime of both lethal and nonlethal fires. Because old forest characteristics have been aggregated into two basic categories, it is generally easier to identify, monitor, and compare the characteristics of these old forest types with desired vegetative conditions than it is with "old growth" (see old growth definition, below).

Old growth—A defined set of forested vegetation conditions that reflect late-successional characteristics, including stand structure, stand size, species composition, snags and down logs, and decadence. Minimum amounts of large trees, large snags, and coarse wood are typically required. Definitions of old growth generally vary by forest type, depending on the disturbance regimes that may be present. Also, within a given forest type, considerable variability can exist across the type's geographical range for specific ecological attributes that characterize late seral and climax stages of development. This variability among and within multiple (often 10-20) forest types makes old growth characteristics difficult to identify, monitor, and compare to desired vegetative conditions.

Open road density—Miles of open road per square mile.

Potential Vegetation Group (PVG)—Potential vegetation types grouped on the basis of a similar general moisture or temperature environment.

Prescribed fire—Any fire ignited by management actions to meet specific objectives.

Project area—The area bounding all management activities associated with a project.

Proposed action—A proposal made by the Forest Service or other federal agency to authorize, recommend, or implement an action to meet a specific purpose and need.

Recontour—Reestablish the natural slope of the land where a road has been located. This may involve pulling the fill material up onto the road surface and/or bringing in material to replace that, which was removed to build the road.

Reforestation—Natural or artificial restocking of an area with Forest trees.

Regeneration—The renewal of a tree crop, whether by natural or artificial means.

Regeneration Treatment (cut)—any removal of trees intended to assist regeneration already present or to make regeneration possible.

Restore—For biological and physical resources, restore means to repair, re-establish, or recover ecosystem functions, processes, or components so that they are moving toward or within their range of desired conditions.

Revegetation—The re-establishment of plant cover, either naturally or by manually seeding.

Riparian areas or Zones—Terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated with high water tables, and soils that exhibit some wetness characteristics.

Riparian Conservation Areas (RCAs)—Portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where proper riparian functions and ecological processes are crucial to maintenance of the area's water, sediment, woody debris, nutrient delivery system, and associated biotic communities and habitat.

Road construction or reconstruction—Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road (36 CFR 212.1.

Road Decommissioning—Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1). Implementation can range from abandoning the road, blocking the road entrance to full obliteration.

Road maintenance—Ongoing upkeep of a road necessary to maintain or restore the road in accordance with its road management objectives (FSM 7705).

Road Obliteration — Road decommissioning technique used to eliminate the functional characteristics of a travelway and reestablish the natural resource production capability. The intent is to make the corridor unusable as a road or a trail and stabilize it against soil loss, which can involve re-contouring and restoring natural slopes (Forest Plan).

Road reconstruction—Activity that results in improvement or realignment of an existing classified road as defined below: (Forest Plan)

- (a) *Road Improvement* Activity that results in an increase of an existing road's traffic service level, expansion of its capacity, or a change in its original design function.
- (b) Road Realignment Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway.

Seasonally open road—Roads open to motorized use on a seasonal basis (e.g., closed during hunting season).

Silvicultural prescription—a planned series of treatments designed to change current stand structure to one that meets management goals.

Skyline logging system – a cable logging system that typically occurs on steeper slopes and utilizes a yarder, carriage and cables to yard logs, with one-end suspension to a consolidated landing. Typically the trees are felled with chainsaw.

Slash—Residue left on the ground after timber cutting and/or accumulation as a result of storm, fire, or other damage.

Standard—As Forest Plan management direction, a standard is a binding limitation placed on management actions. It must be within the authority and ability of the Forest Service to enforce. A project or action that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard.

Subwatershed—An area of land that drains to a common point. A subwatershed is smaller subdivision of a watershed but is larger than a drainage or site.

Targeted grazing - The application of livestock grazing at a specified season, duration and intensity to accomplish specific vegetation management goals. The term "targeted" refers to the specific plant or landscape that is the aim of controlled grazing practices.

Temporary road or trail—A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas (36 CFR 212.1).

Tethered logging system – winch-assisted, cable-assisted, or traction-assisted ground-based logging equipment typically used on slopes greater than 40 percent, typically utilizing a cut-to-length harvesting method to minimize soil impacts.

Thinning—A silvicultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

Threatened species—Designated by the FWS or NOAA Fisheries, in accordance with the Endangered Species Act; a plant or animal species, or critical habitat, given federal protection, because it is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

Total Road Density – Miles of both system road and unauthorized routes per square mile.

Unauthorized road or trail—A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas (36 CFR 212.1).

Underburn—A broadcast burn under an existing forest canopy. A fire prescribed to reduce fuels without significantly altering the larger tree component.

Watershed Condition Indicator (WCI)—WCIs are an integrated suite of aquatic (including biophysical components), riparian (including riparian –associated vegetation species), and hydrologic (including uplands) condition measures that are intended to be used at a variety of watershed scales. They assist in determining the current condition of a watershed and should be used to help design appropriate management actions, or to alter or mitigate proposed and or ongoing actions, to move watersheds toward desired conditions. WCIs represent a diagnostic means to determine factors of current condition and assist in determining future conditions associated with implementing management actions or natural restoration over time.

Granite Meadows Project

Acronyms

ACS – Aquatic Conservation Strategy

AOP – Aquatic Organism Passage

CFLRA - Collaborative Forest Landscape Restoration Act

CH – Designated Critical Habitat

ESA – Endangered Species Act

FA – Functioning Appropriately

FR – Functioning at Risk

FUR – Functioning at Unacceptable Risk

IRA - Inventoried Roadless Area

LSR - Little Salmon River

LTC – Long Term Closure

MA - Management Area

MRS – Minimum Road System

NFS – National Forest System

NIDGS - Northern Idaho Ground Squirrel

NFPR - North Fork Payette River

OHV - Off-Highway Vehicle

PFC - Payette Forest Coalition

PVG – Potential Vegetation Group

RCA - Riparian Conservation Area

TAP - Travel Analysis Process

TES – Threatened or endangered species

WCF - Watershed Condition Framework

WCI - Watershed Condition Indicator

WUI - Wildland Urban Interface

Appendix 5. Figures

Figure 1. Granite Meadows Vicinity Map

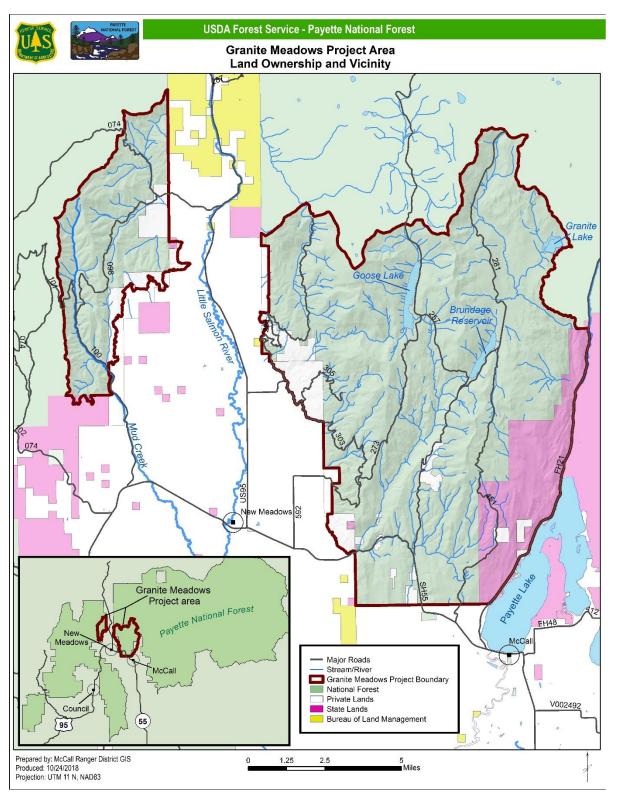


Figure 2. Commercial Treatments

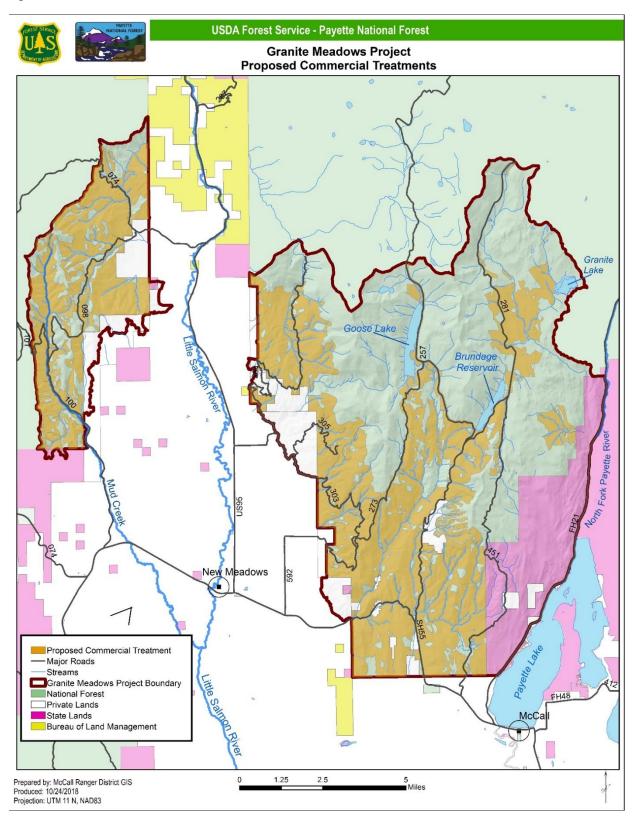


Figure 3. Prescribed Fire Treatments

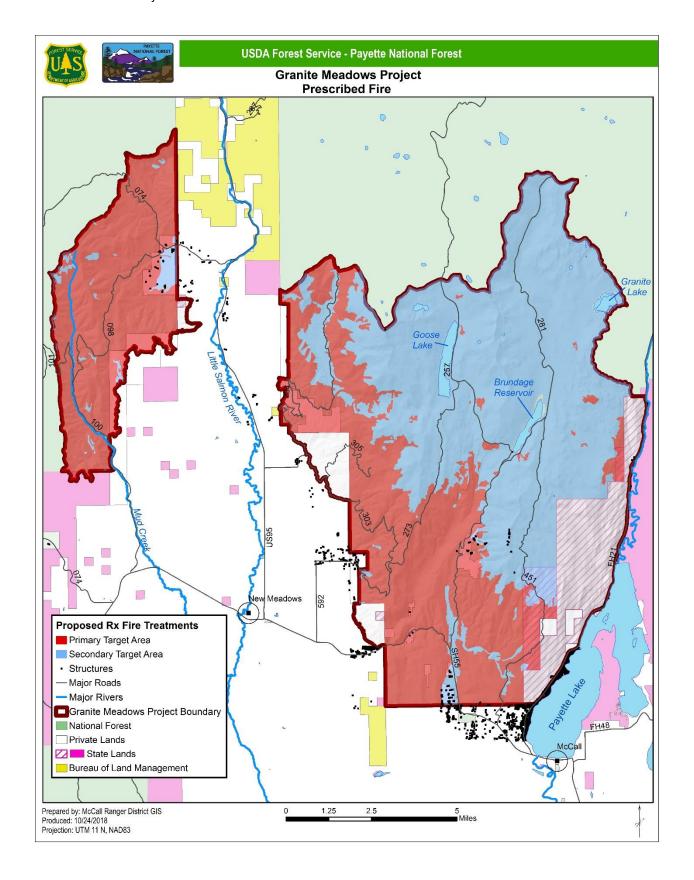


Figure 4. Wildland/Urban Interface and Ingress/Egress Routes

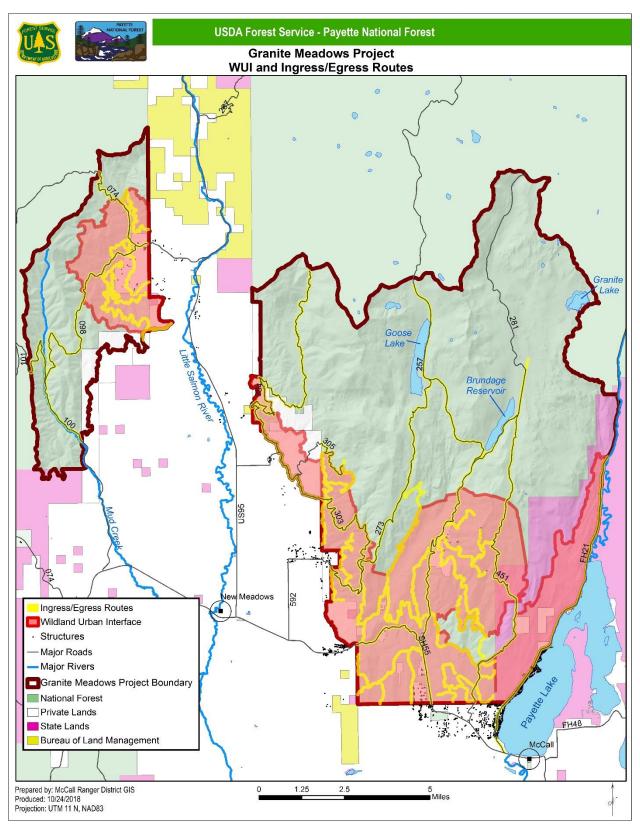


Figure 5. Watershed Restoration Treatments – West Side

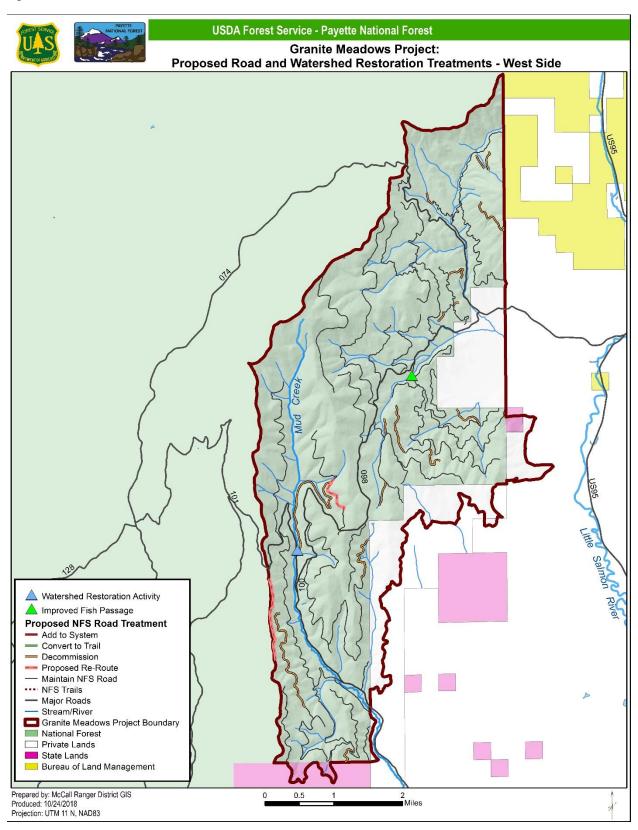


Figure 6. Watershed Restoration Treatments - East Side

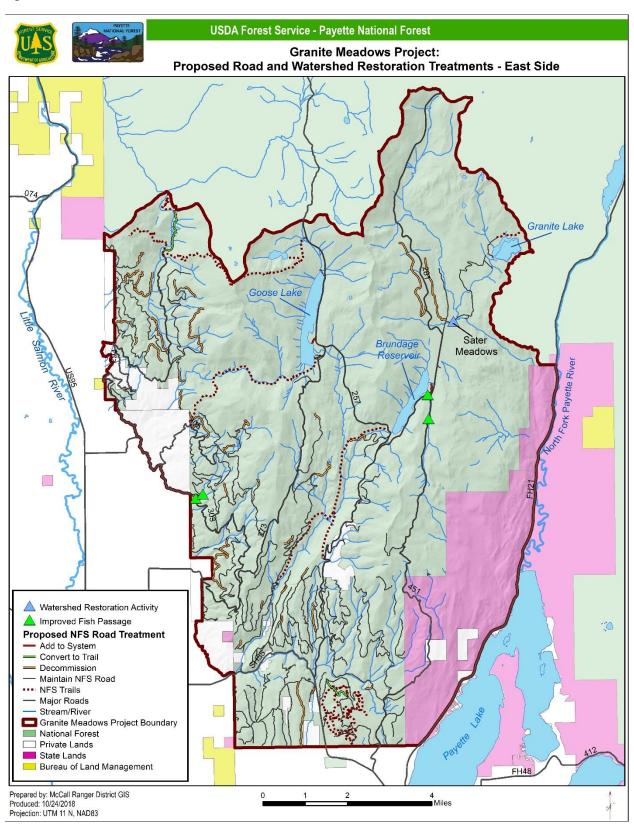


Figure 7. Recreation Improvements

